

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An optical recording apparatus for recording a hologram in an optical recording medium, comprising:

a spatial light modulator which modulates light incident from a single light source and generates signal light and reference light, the spatial light modulator modulating the signal light according to a signal to be recorded in the optical recording medium to cause a polarization direction of the signal light to have a predetermined polarization direction and to cause a polarization direction of the reference light to have a direction crossed at right angles with the predetermined polarization direction;

a wavelength plate which converts the signal light and the reference light, which have been generated by the spatial light modulator, into circularly polarized light in which the signal light and the reference light revolve in directions opposite to each other; and

a condensing optical system which condenses the circularly polarized light, which has been converted by the wavelength plate and in which the signal light and the reference light revolve in directions opposite to each other, into a predetermined area of the optical recording medium.

2. (Original) An optical recording apparatus according to claim 1, wherein a holographic optical element for forming a predetermined wavefront for the reference light is further arranged between the spatial light modulator and the wavelength plate.

3. (Original) An optical recording apparatus according to claim 2, wherein the holographic optical element is a light diffuser which diffuses the reference light.

4. (Original) An optical recording apparatus according to claim 1, wherein the spatial light modulator comprises a transmissive liquid crystal cell in which transparent

electrodes are formed on both surfaces of a plate-shaped liquid crystal, a first polarizing plate which is arranged on a light incident side of the liquid crystal cell and transmits light of the predetermined polarization direction, and a second polarizing plate which is arranged on a light outgoing side of the liquid crystal cell and transmits light of any polarization direction at a substantially central portion thereof and transmits light of the predetermined polarization direction at a portion thereof surrounding the substantially central portion.

5. (Original) An optical recording apparatus according to claim 4, wherein the spatial light modulator is a liquid crystal panel for a projector.

6-11. (Canceled)

12. (Original) An optical recording/reproducing apparatus comprising:
a spatial light modulator which modulates light incident from a single light source and generates signal light and reference light, the spatial light modulator modulating the signal light according to a signal to be recorded in an optical recording medium to cause a polarization direction of the signal light to have a predetermined polarization direction and to cause a polarization direction of the reference light to have a polarization direction crossed at right angles with the predetermined polarization direction;

a polarizing beam splitter which transmits light incident from the spatial light modulator irrespective of a polarization direction thereof, the polarizing beam splitter reflecting reproducing light incident from the optical recording medium toward a predetermined direction according to a polarization direction thereof and transmitting the light incident from the optical recording medium except for the reproducing light irrespective of a polarization direction thereof;

a wavelength plate which converts linearly polarized light incident from the polarizing beam splitter into circularly polarized light and converts circularly polarized light into linearly polarized light; and

a condensing optical system which condenses light incident from the wavelength plate into a predetermined area of the optical recording medium,

wherein in the case that a hologram is to be recorded in the optical recording medium, the spatial light modulator generates the signal light and the reference light, the wavelength plate converts the generated signal light and the generated reference light into circularly polarized light in which the signal light and the reference light revolve in directions opposite to each other, and the condensing optical system condenses the circularly polarized light, which is converted with the wavelength plate and in which the signal light and the reference light revolve in directions opposite to each other, into a predetermined area of the optical recording medium, and

in the case that that a hologram recorded in the optical recording medium is to be reproduced, the spatial light modulator generates the reference light, the wavelength plate converts the generated reference light into circularly polarized light, the condensing optical system condenses the circularly polarized light, which is converted by the wavelength plate, into a predetermined area of the optical recording medium, the wavelength plate converts obtained reproducing light into linearly polarized light, and the polarizing beam splitter reflects the converted linearly polarized light toward a predetermined direction.

13. (Original) An optical recording/reproducing apparatus according to claim 12, wherein a holographic optical element for forming a predetermined wavefront for the reference light is further arranged between the spatial light modulator and the wavelength plate.

14. (Original) An optical recording/reproducing apparatus according to claim 13, wherein the holographic optical element is a light diffuser which diffuses the reference light.

15. (Original) An optical recording/reproducing apparatus according to claim 12, wherein the spatial light modulator comprises a transmissive liquid crystal cell in which

transparent electrodes are formed on both surfaces of a plate-shaped liquid crystal, a first polarizing plate which is arranged on a light incident side of the liquid crystal cell and transmits light of the predetermined polarization direction, and a second polarizing plate which is arranged on a light outgoing side of the liquid crystal cell and transmits light of any polarization direction at a substantially central portion thereof and transmits light of the predetermined polarization direction at a portion thereof surrounding the substantially central portion.

16. (Original) An optical recording/reproducing apparatus according to claim 15, wherein the spatial light modulator is a liquid crystal panel for a projector.

17. (Original) An optical recording/reproducing apparatus according to claim 15, wherein the polarizing beam splitter has a passing hole having a diameter corresponding to the substantially central portion of the second polarizing plate.

18. (New) An optical recording apparatus according to claim 1, wherein a signal light and the reference light are coaxially transmitted through the special light modulator, the wave length plate, and the condensing optical system.

19. (New) An optical recording/reproducing apparatus according to claim 12, wherein a signal light and the reference light are coaxially transmitted through the special light modulator, the wave length plate, and the condensing optical system.